

amendments and remarks. Please charge any fees that may be incurred to the deposit account 09-0456.

In the Specification

Please amend the Specification as follows:

✓
Please add the following new paragraph before the first paragraph:

Cross Reference to Related Applications

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This application is based on Provisional Application Number 60/172,198, filed on December 17, 1999.

Amend paragraph 3 on page 4 [✓]as follows:

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Once product FMAX data is collected on a given number of integrated circuits, both on a tester and in a system, that data can be analyzed to determine the system-to-tester offset model. Based on various products studied, in gathering system and tester data best results occur by sampling at least 15 to 20 processors per performance sort. ~~generated.~~ At step 50 the system and tester FMAX data is input into the statistical software program. At step 52 a system-to-tester FMAX delta is calculated. This delta at step 54 is tested for best distribution type (typically, the distribution is Gaussian). Based on best distribution fit, at step 58 distribution parameters are calculated based on sample size and confidence selected at step 60 (for Gaussian distribution, population mean and

standard deviation are estimated). For a Gaussian distribution, a t-distribution is used to estimate population mean and chi-squared distribution is used to estimate population standard deviation. These results are output to the Monte Carlo routine at step 62. This process is repeated through step 64 -for each performance sort or system 56 under analysis until the process is completed at step 66.

Amend paragraph 1 on page 5 as follows:

As illustrated in FIG. 7 the models previously described ~~denoted~~ as blocks 100, 110, 120, and 130 are inputs to the Monte Carlo analysis as well as market sector- quality (i.e. SPQL) expectations denoted as block 140. Each model is incorporated using the distribution type determined during the analysis previously described. A loop value is set (shown as 10,000, in block 150 but can be any relatively large number). Each model contributes a value at step 160 which is randomly selected based on distribution type. One guardband value is determined by combining the individual values and then adding hot-e input based on performance sort. This is repeated through steps 180, 190 and 170 until the loop value selected in block 150 is reached. The output is a distribution of guardbands based on all factors previously discussed. Finally, depending on market quality expectations input at block 200, a guardband can be selected at 210 which intelligently satisfies market tolerance expectations while minimizing yield loss (See Figure 2). As can be seen from Fig. 2, trimming a few percent off a guardband , shown as vertical axis 4, to make yield targets without understanding the effects on product quality may adversely effect product quality. The opposite holds true as well. Over-

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guardbanding can lead to quality levels not required in the market which can in turn adversely affect yields and revenue.
